



MORBIDITY AND MORTALITY WEEKLY REPORT

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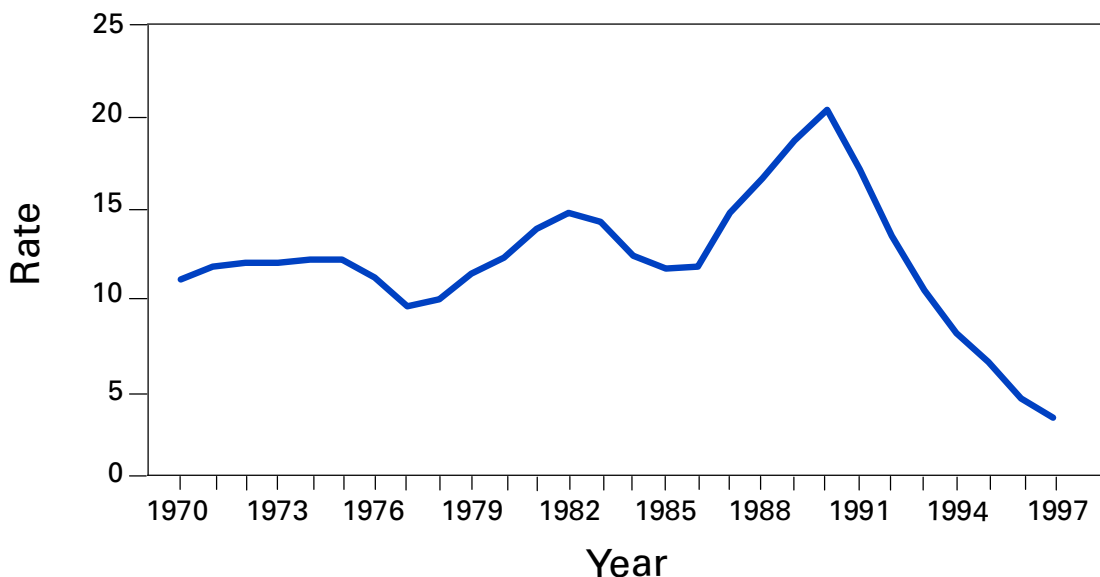
## Primary and Secondary Syphilis — United States, 1997

Syphilis is an acute and chronic sexually transmitted disease (STD) caused by infection with *Treponema pallidum*. The disease is characterized by skin and mucous membrane lesions in the acute phase (primary and secondary [P&S] syphilis) and lesions of the bone, viscera, and cardiovascular and neurologic systems in the chronic phase. Because syphilis enhances transmission of human immunodeficiency virus (HIV), prevention of syphilis is important for controlling HIV (1). During 1986–1990, an epidemic of syphilis occurred throughout the United States (2). Syphilis rates began to decline in 1991 and have declined each year since that time. To determine whether this decline is reflected in changes in the epidemiology of syphilis, CDC analyzed notifiable disease surveillance data for 1997. This report summarizes the findings of the analysis, which indicate that reported P&S syphilis cases declined 84% from 1990 to 1997, that syphilis remains substantially more common in non-Hispanic blacks than in other racial/ethnic groups, and that it continues to be concentrated in the Southern region of the United States.

Summary data for syphilis cases reported to state health departments for 1997 were sent quarterly and annually to CDC. Data from states included the total number of syphilis cases by county, sex, stage of disease, racial/ethnic group, and 5-year age group. Data on reported cases of syphilis in the P&S stages were analyzed for this report because those cases best represent incident cases (i.e., newly acquired infections within the evaluated time period). P&S syphilis rates were calculated per 100,000 persons using population denominators from the Bureau of Census (2).

In 1997, the incidence of P&S syphilis in the United States was 3.2 per 100,000 population (Figure 1). Rates of P&S syphilis were higher in the South (6.6 per 100,000 population) than in the Midwest (2.0), Northeast (1.1), and West (1.0).<sup>\*</sup> The South is the only region that has not achieved the revised national health objective for 2000 (HP2000) of four cases per 100,000 population (objective 19.3) (2). In 1997, a total of 41 (82%) states had P&S syphilis rates below the HP2000 objective, and 21 states

<sup>\*</sup> *Northeast*=Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; *Midwest*=Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; *South*=Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; *West*=Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

*Primary and Secondary Syphilis — Continued***FIGURE 1. Primary and secondary syphilis rates\*, by year — United States, 1970–1997**

\*Per 100,000 population.

(42%) reported 10 or fewer cases of P&S syphilis (Table 1). Montana, New Hampshire, North Dakota, Vermont, and Wyoming reported zero cases of P&S syphilis. No cases of P&S syphilis were reported in 1997 from 2324 (75%) of 3115 counties. Rates of P&S syphilis were below the HP2000 objective in 2698 (86%) counties. A total of 31 (1.0%) counties accounted for 50% of P&S syphilis cases, and 186 (6%) counties accounted for 85% of all reported P&S syphilis cases (Figure 2).

P&S syphilis rates for blacks remained substantially higher than those for non-Hispanic whites and Hispanics. In 1997, the P&S syphilis rate for blacks was 22.0 per 100,000, compared with 1.6 for Hispanics and 0.5 for non-Hispanic whites. The overall male-to-female P&S syphilis rate ratio was 1.2; this rate ratio was higher for Hispanics (2.1) than for blacks (1.3) and non-Hispanic whites (1.2). P&S syphilis rates were highest for Hispanic women aged 15–19 years (2.7), for black women aged 20–24 years (47.9), and for non-Hispanic white women aged 25–39 years (1.2). P&S syphilis rates were highest for Hispanic men aged 25–29 years (5.5) and for black and non-Hispanic white men aged 35–39 years (50.6 and 1.2, respectively).

From 1990 to 1997, P&S syphilis rates declined 84% in the United States, in all regions (95% in the Northeast, 91% in the West, 80% in the South, and 73% in the Midwest), and in all but two states (Indiana and Kentucky). Rates in Indiana and Kentucky peaked in 1993 and have declined steadily since that time. Rates of P&S syphilis were below the revised HP2000 objective in 86% of all counties in 1997, compared with 69% in 1990.

P&S syphilis rates have declined for all racial/ethnic groups; the largest decline occurred among Hispanics (90%) followed by blacks (85%) and non-Hispanic whites (81%). The P&S syphilis male-to-female rate ratio has remained stable for all races.

*Reported by: Div of Sexually Transmitted Diseases Prevention, National Center for HIV, STD, and TB Prevention, CDC.*

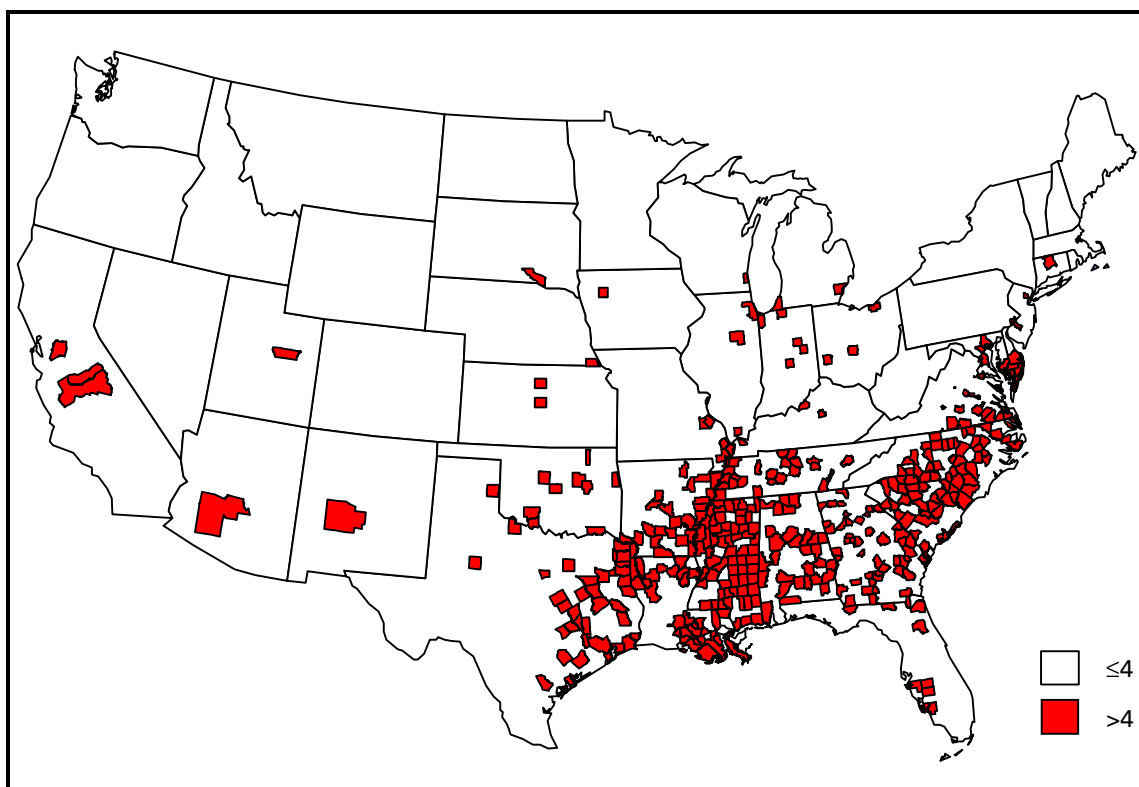
*Primary and Secondary Syphilis — Continued***TABLE 1. Reported primary and secondary syphilis rates\*, by state and sex — United States, 1997**

State	Male	Female	Total	State	Male	Female	Total
Alabama	11.1	8.2	9.6	Nebraska	0.4	0.2	0.3
Alaska	0.3	0	0.2	Nevada	0.5	0.8	0.6
Arizona	4.3	1.7	3.0	New Hampshire	0	0	0
Arkansas	5.8	7.9	6.9	New Jersey	2.4	1.4	1.9
California	1.7	0.7	1.2	New Mexico	0.5	0.6	0.5
Colorado	0.5	0.3	0.4	New York	0.9	0.6	0.8
Connecticut	2.3	1.5	1.9	North Carolina	10.3	9.4	9.8
Delaware	3.4	2.7	3.0	North Dakota	0	0	0
Florida	2.4	1.8	2.1	Ohio	2.2	1.8	2.0
Georgia	9.0	5.1	7.0	Oklahoma	4.0	3.1	3.5
Hawaii	0.2	0	0.1	Oregon	0.5	0.1	0.3
Idaho	0.2	0	0.1	Pennsylvania	1.2	0.8	1.0
Illinois	4.2	3.2	3.7	Rhode Island	0.2	0.2	0.2
Indiana	2.4	2.7	2.6	South Carolina	11.5	9.0	10.2
Iowa	0.2	0.3	0.2	South Dakota	0.3	0	0.1
Kansas	1.4	0.8	1.1	Tennessee	14.7	13.5	14.0
Kentucky	3.7	3.3	3.5	Texas	3.8	3.3	3.5
Louisiana	8.4	8.3	8.4	Utah	0.3	0.2	0.2
Maine	0.2	0.2	0.2	Vermont	0	0	0
Maryland	19.8	15.4	17.6	Virginia	3.8	3.3	3.5
Massachusetts	1.5	1.0	1.3	Washington	0.3	0.3	0.3
Michigan	1.8	1.4	1.6	West Virginia	0.1	0	0.1
Minnesota	0.5	0.2	0.3	Wisconsin	1.6	1.9	1.7
Mississippi	14.5	14.2	14.4	Wyoming	0	0	0
Missouri	2.1	2.2	2.1	<b>Total</b>	<b>3.6</b>	<b>2.9</b>	<b>3.2</b>
Montana	0	0	0				

\* Per 100,000 population.

**Editorial Note:** The findings in this report document substantial progress in the control and prevention of infectious syphilis in the United States. P&S syphilis is at its lowest level since reporting began in 1941. Although syphilis remains an endemic disease in parts of the South, rates in this region have declined 80% since 1990. The South has had the highest syphilis rates since the 1940s, in part because of limited access to health care in many parts of the South. Despite substantial declines in P&S syphilis in all racial/ethnic groups, syphilis continues to disproportionately affect blacks. Reporting of syphilis has presumably been biased toward over-reporting of infections in persons of minority races/ethnicities who attend public STD clinics; the degree to which this bias influences disease rates across racial/ethnic groups is unknown. Reasons for these reported racial disparities require further investigation.

At least four factors may have contributed to the recent decline in syphilis. First, after recognition of the epidemic in the mid-1980s, increased state and federal resources were invested in syphilis control programs (3). These resources were used for both traditional (e.g., partner notification and clinical services) and nontraditional (e.g., community-based screening and outreach and risk-reduction counseling) activities (3). Second, since the mid-1980s, a variety of HIV prevention activities have been implemented throughout the United States. Although these activities probably contributed to declines in all STDs, it is unknown how these activities contributed to the prevention of specific bacterial STDs. Third, a decline in crack cocaine use (4) may have resulted in a decline in the incidence of syphilis. Use of crack cocaine and exchange of sex for drugs were major contributors to the recent syphilis epidemic (5). Finally, the presence of acquired immunity in the population at risk following the epidemic may have contributed to the decline (6,7).

*Primary and Secondary Syphilis — Continued***FIGURE 2. Counties with primary and secondary syphilis rates above or at the national health objective for 2000 of four cases per 100,000 population — United States, 1997**

A concerted effort while rates are low and disease is focal could contribute to the possible elimination of domestic transmission of syphilis in the United States (8). In 1996, the Council of State and Territorial Epidemiologists proposed that syphilis surveillance systems be evaluated and strengthened, that treatment and prevention efforts be enhanced in areas of substantial ongoing transmission, that a national workgroup be convened to evaluate the possibility of elimination of domestic syphilis transmission, and that ongoing support for syphilis control be maintained or enhanced until domestic syphilis is eliminated. A recent Institute of Medicine report on STDs in the United States suggests that STD surveillance systems use new information technology, be accurate and timely enough to identify national and local trends in STD incidence, and provide the data necessary to direct local activities (9). CDC is working toward improving syphilis surveillance on a national level by encouraging state and local health departments to discontinue aggregate syphilis reporting and to collect, analyze, take action on, and report line-listed case reports of syphilis electronically to CDC. These line-listed data will provide an opportunity to analyze case reports at the county level by a variety of demographic characteristics and other potential risk factors for STD.

Syphilis is increasingly manifested as an epidemic rather than an endemic disease in the United States; focal outbreaks are still occurring (5). Optimal combinations of several different prevention and control strategies may be useful for areas with

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different levels of morbidity (i.e., to prevent importation into those areas without disease and to intensify detection and control in those areas with substantial morbidity). Several state and local health departments have developed enhanced syphilis control and elimination plans (e.g., California, Florida, Massachusetts, and San Diego County). Components of such a plan could include an evaluation and enhancement of the surveillance system, a review of the epidemiology of syphilis in the local area and development of targeted interventions if applicable, and enhancement of screening for syphilis in high-risk populations (e.g., correctional and drug-treatment facilities and emergency departments).

*References*

1. Grosskurth H, Mosha F, Todd J, et al. Impact of improved treatment of sexually transmitted diseases on HIV infection in rural Tanzania: randomised controlled trial. *Lancet* 1995;346:530–6.
2. CDC. Sexually transmitted disease surveillance, 1997. Washington, DC: US Department of Health and Human Services, CDC, September 1998 (in press).
3. Webster LA, Rolfs RT. Surveillance for primary and secondary syphilis—United States, 1991. *MMWR* 1993;42(no. SS-3):13–9.
4. Golub AL, Johnson BD. Crack's decline: some surprises across U.S. cities. Washington, DC: National Institute of Justice, July 1997.
5. Rolfs RT, Goldberg M, Sharrar RG. Risk factors for syphilis: cocaine and prostitution. *Am J Public Health* 1990;80:853–7.
6. Nakashima AK, Rolfs RT, Flock ML, Kilmarx P, Greenspan JR. Epidemiology of syphilis in the United States, 1941–1993. *Sex Transm Dis* 1996;23:16–23.
7. Garnett GP, Aral SO, Hoyle DV, Cates W, Anderson RM. The natural history of syphilis: implications for the transmission dynamics and control of infection. *Sex Transm Dis* 1997;24:185–200.
8. St. Louis ME, Farley TA, Aral SO. Untangling the persistence of syphilis in the South. *Sex Transm Dis* 1996;23:1–4.
9. Institute of Medicine. The hidden epidemic: confronting sexually transmitted diseases. Washington, DC: National Academy Press, 1997.

### **State-Specific Pregnancy Rates Among Adolescents — United States, 1992–1995**

In the United States during 1985–1990, the pregnancy rate for persons aged 15–19 years increased 9% (1). From 1991 to 1992, however, the rate declined substantially in 31 of the 42 states\* for which data were available (2); from 1992 through 1995, the birth rate declined steadily (3), and state-specific abortion rates decreased annually (4,5). This report presents estimated state-specific pregnancy rates for 1992–1995† for adolescents aged ≤19 years by age and race and the percentage change in state-specific pregnancy rates for persons aged 15–19 years for 1992 to 1995. The findings indicate a downward trend in pregnancy rates for persons aged 15–19 years during 1992–1995 for all 43 states for which data were available.

Number of pregnancies was estimated as the sum of live births, legal induced abortions, and estimated fetal losses (i.e., spontaneous abortions and stillbirths) among

\*The word "state" in this report includes the District of Columbia except where explicitly noted.

†State-specific adolescent pregnancy rates for 1992 were previously reported by CDC (2). Data for 1992 are reported here because of the inclusion, for the first time, of estimated fetal losses in the calculation of pregnancy rate. Adolescent pregnancy rates published by CDC before this report should not be used together with those reported here in time series analyses because of this change in methods.

*Pregnancy Rates — Continued*

adolescents aged  $\leq 19$  years. Data about live-born infants were obtained from birth certificates and were reported by the mother's state of residence. Because abortion data by residence were not available for all states, abortions were reported by state of occurrence.<sup>§</sup> Estimates of fetal loss were based on sample survey data of women aged 15–44 years from the 1988 and 1995 National Survey of Family Growth (NSFG). A national estimate of fetal loss for all adolescents aged 15–19 years was derived from NSFG data and was used to create annual estimates of fetal losses based on the number of live births and legal induced abortions in a given year (CDC, unpublished data, 1998). Denominators were obtained from postcensal population estimates provided by the Bureau of the Census (6).

Rates were calculated as the number of pregnancies per 1000 females aged 15–17, 18–19, or 15–19 years. Because most pregnancies (98% of live-born infants and 94% of legal induced abortions) among persons aged  $<15$  years occur among those aged 13–14 years (CDC, unpublished data, 1995; 7), the number of persons aged 13–14 years was used as the denominator when the rate was calculated for the  $<15$ -year age group. Legal induced abortions for which mother's age or race was unknown were included in categories based on the distribution of mothers with known age or race. Changes in pregnancy rates for persons aged 15–19 years from 1992 to 1995 were tested for statistical significance at  $p < 0.05$ .

Although abortion totals were available for all states, age-specific data were only available from 43 states for 1992–1995; abortion data stratified by age and race were available from 37 states for 1992–1995. Because adequate age and Hispanic ethnicity data for women who had abortions were available for only 19 states in 1992, 21 states in 1993 and 1995, and 22 states in 1994, pregnancy rates by ethnicity are not included.

Pregnancy rates for persons aged 15–19 years ranged from 63.3 (Wyoming) to 126.0 (Georgia) in 1992<sup>¶</sup>; from 62.0 (Minnesota) to 122.0 (Georgia) in 1993; from 57.1 (North Dakota) to 119.0 (Texas) in 1994; and from 56.3 (North Dakota) to 117.1 (Nevada) in 1995 (Table 1). In each year, the rate was highest for persons aged 18–19 years and lowest for those aged  $<15$  years. During 1992–1995, the pregnancy rate for persons aged 15–19 years decreased in each of the 43 states for which age-specific data were available. Declines ranged from 2.8% (Arkansas) to 20.1% (Vermont); all but one of these decreases were statistically significant.

Rates declined for persons aged 18–19 years in all 42 reporting states from 1992 to 1995. However, pregnancy rates increased for those aged  $<15$  years in nine of 40 states for which data were available and for those aged 15–17 years in two of 42 states. Rates for persons aged 15–19 years were, in most cases, higher for blacks than for whites among states for which data were available (Table 2). However, in 24 of the 26 states for which data were available, the decline in pregnancy rate for blacks was greater than for whites from 1992 to 1995.

From 1992 to 1995, abortion and birth rates declined for persons aged 15–19 years. Of 43 states for which data were available, 40 reported a decreased adolescent

<sup>§</sup>For 47 reporting areas during 1992–1994 and for 48 areas in 1995, the number and characteristics of persons who obtained legal induced abortions were provided by the central health agency (state health departments and the health departments of New York City and the District of Columbia). For five areas during 1992–1994 and for four areas during 1995, data about the number of abortions were provided by hospitals and other medical facilities.

<sup>¶</sup>District of Columbia is not included in these comparisons because its pregnancy rates were higher than for any state, in part because of large numbers of abortions among nonresidents.

*Pregnancy Rates — Continued*

abortion rate (CDC, unpublished data, 1992, 1995), and birth rates declined in 50 of 51 states (2,3). Relative decreases in abortion rates generally exceeded declines in birth rates.

*Reported by: Behavioral Epidemiology and Demographic Research Br and Statistics and Computer Resources Br, Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

**Editorial Note:** The findings in this report indicate a downward trend in adolescent pregnancy rates during the first half of the 1990s. Adolescent pregnancy rates declined in states with high and with low rates, suggesting the potential for all states to achieve lower adolescent pregnancy rates.

The estimation of adolescent pregnancy rates was limited by the lack of age-specific data for eight states and adequate race-specific abortion data for 17 states. The lack of age-specific abortion data by ethnicity in most states also limited this analysis because the ethnic composition of state populations is an important determinant of state variations in pregnancy rates.

Legal induced abortions reported to CDC may undercount the true number of abortions. Use of abortion data by state of occurrence rather than by state of residence may have overestimated the abortion rate in states with large metropolitan areas that might draw from adjoining states, such as New York City and the District of Columbia. Estimates of fetal loss are subject to underreporting, especially because of unrecognized early fetal losses; fetal loss estimates are based on small numbers of adolescent pregnancies. Therefore, pregnancy totals based on births, legal induced abortions reported to CDC, and fetal loss estimates may underestimate the actual pregnancy rate. However, underreporting probably remains relatively constant from year to year and is unlikely to affect the trends in this report substantially.

Sexual experience, sexual activity, and effective contraceptive use are important determinants of changes in pregnancy rates. After increasing in the 1980s, the estimated proportion of adolescent females aged 15–19 years who were sexually experienced (i.e., ever had sexual intercourse) and the percentage who were sexually active (i.e., had had sexual intercourse within 3 months of interview) stabilized from 1988 to 1995 (8). The proportion of adolescents who reported having used contraception at first intercourse increased from 1988 to 1995 (3) but little change was found in the proportion of persons aged 15–19 years who reported using a contraceptive method within 1 month of interview (9). Among those who reported using a contraceptive method within 1 month of interview, use of oral contraceptives declined from 1988 to 1995, and use of condoms and long-acting contraceptive methods increased.

Sexual experience and contraceptive use may be influenced by motivation to avoid pregnancy, access to health-care services, income, education, and other factors. Sustaining the downward trend in adolescent pregnancy will require solutions that address complex individual and community-level factors that can affect adolescents' sexual and reproductive behavior. Programs designed to reduce adolescent pregnancy that address an array of risk factors (e.g., socioeconomic disadvantage, poor educational and employment opportunities, or lack of social support) in addition to specific skills to postpone sexual experience and increase contraceptive use may be more effective in reducing adolescent pregnancy than programs focusing exclusively on changing sexual beliefs or behavior (10). Additional characteristics of effective programs are strong educational components, messages tailored to the needs of

**TABLE 1. Pregnancy rates\* for adolescents aged ≤19 years, by age group and state†, and percentage change§ in rates for 15–19-year-olds — United States, 1992–1995**

State	1992				1993				1994				1995				% Change in rate for 15–19-year-olds from 1992 to 1995§
	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	<15	15–17	18–19	15–19	
Alabama	10.8	71.7	164.4	109.9	11.6	72.8	158.3	108.1	10.6	75.5	160.6	110.1	10.1	71.1	158.2	106.3	–3.3
Arizona	6.5	76.0	192.4	122.1	5.6	73.9	187.3	118.4	6.7	74.7	183.7	117.1	6.3	70.5	164.4	108.2	–11.4
Arkansas	8.2	66.1	166.4	107.0	7.7	64.0	161.6	103.7	8.1	68.8	166.8	108.3	8.4	68.1	158.3	104.1	–2.8
Colorado	5.5	61.4	144.0	94.2	5.0	58.1	134.4	88.0	4.9	56.3	130.2	85.1	4.2	54.2	121.0	80.4	–14.7
Connecticut	7.7	63.6	135.5	92.8	7.4	63.5	130.3	90.2	5.6	62.5	122.1	85.8	5.0	53.8	114.7	77.3	–16.8
District of Columbia	36.1	¶	¶	245.7	28.4	¶	¶	278.1	41.3	¶	¶	267.3	26.0	¶	¶	229.6	–6.6
Georgia	12.5	82.0	188.6	126.0	12.3	81.9	181.1	122.0	12.4	80.0	175.3	117.5	11.9	79.2	172.4	115.6	–8.3
Hawaii	7.8	66.5	149.3	101.9	5.6	64.5	153.4	102.1	6.4	68.4	152.9	103.7	7.3	58.5	139.4	92.3	–9.4
Idaho	2.3	38.5	119.9	70.4	2.3	39.2	110.1	67.3	2.7	35.8	99.9	61.2	2.9	35.1	105.6	63.4	–9.9
Indiana	4.8	50.0	136.4	85.2	4.2	48.3	132.8	82.6	5.1	49.8	133.6	83.4	4.8	49.9	132.0	82.4	–3.2
Kansas	5.8	63.3	164.0	102.6	6.6	63.1	164.4	102.6	5.3	60.5	154.5	96.9	7.1	59.6	150.7	94.9	–7.5
Kentucky	7.1	61.4	148.1	96.4	6.7	61.7	142.7	94.3	6.6	59.7	144.8	93.5	5.8	55.9	138.0	88.6	–8.1
Louisiana	10.3	73.3	162.5	109.2	9.9	73.2	158.4	107.6	9.6	71.4	156.7	105.6	8.2	63.7	149.9	98.2	–10.1
Maine	2.5	37.6	104.4	65.1	2.8	36.9	103.3	63.4	2.6	33.0	102.2	60.0	2.7	36.3	94.2	58.7	–9.8
Maryland	8.5	60.5	134.2	90.7	8.8	61.3	129.3	88.4	8.4	57.6	129.6	85.8	7.0	54.9	123.3	81.4	–10.2
Massachusetts	5.7	50.0	125.3	82.0	6.0	49.1	138.4	86.1	5.5	47.9	127.9	80.2	4.3	44.3	113.1	71.8	–12.5
Michigan	6.0	56.7	148.1	94.0	5.7	55.9	139.1	89.2	5.7	53.0	137.4	86.1	5.3	50.1	128.9	80.6	–14.2
Minnesota	3.7	37.4	107.9	65.1	3.5	35.9	102.9	62.0	3.5	34.4	100.8	59.8	2.7	34.0	92.9	56.4	–13.3
Mississippi	12.9	83.9	169.5	118.8	13.2	77.7	167.9	114.2	11.6	73.9	156.0	106.8	10.8	73.4	147.8	103.1	–13.2
Missouri	5.5	55.5	147.0	92.0	6.0	52.7	137.6	86.3	5.6	51.0	138.5	85.0	5.2	46.7	131.0	79.3	–13.8
Montana	4.2	51.2	132.6	82.8	3.2	48.6	127.5	79.1	3.6	43.1	123.1	73.7	2.7	43.9	118.6	72.8	–12.0
Nebraska	3.9	41.7	124.1	74.7	3.8	40.4	119.9	72.5	3.8	42.3	120.6	73.6	3.1	38.9	103.5	64.6	–13.5
Nevada	8.6	77.3	195.9	125.0	7.4	75.8	184.7	118.8	6.8	76.1	180.4	116.6	6.7	74.6	185.1	117.1	–6.3
New Jersey	6.8	51.9	126.9	82.2	6.8	52.1	117.1	78.0	6.3	49.6	116.7	75.9	5.0	46.3	112.8	72.0	–12.4
New Mexico	5.8	78.9	182.8	120.0	5.9	77.6	179.5	117.6	6.8	74.2	167.3	110.1	6.7	70.2	164.4	106.8	–11.0
New York	10.1	76.4	169.0	113.9	9.3	77.2	168.2	113.8	8.7	76.1	165.9	111.9	7.8	70.0	160.0	105.8	–7.1
North Carolina	10.0	80.5	183.5	123.4	9.5	79.1	178.4	119.7	10.3	80.4	175.2	118.4	9.6	75.4	168.5	112.4	–8.9
North Dakota	**	31.6	115.5	63.9	**	30.7	112.9	62.3	**	27.4	104.8	57.1	**	30.8	97.0	56.3	–11.8
Ohio	5.3	52.2	140.0	88.0	5.6	54.3	140.2	89.0	5.4	53.1	136.1	86.0	4.8	51.5	132.4	83.3	–5.4
Oregon	4.8	57.6	156.0	95.5	4.9	58.5	151.0	94.3	5.0	59.2	146.7	93.0	5.4	58.2	146.9	92.5	–3.2
Pennsylvania	7.4	54.9	127.2	84.6	6.8	54.6	124.7	82.9	6.5	48.8	118.7	76.4	5.6	44.4	113.9	71.6	–15.3
Rhode Island	7.3	58.5	166.6	103.9	5.9	63.6	171.6	107.7	7.5	61.4	162.2	101.1	5.3	54.1	154.4	93.5	–10.1
South Carolina	8.9	68.1	153.7	103.8	9.0	65.0	147.1	98.9	8.5	68.8	143.1	99.0	8.8	64.8	142.0	96.0	–7.5
South Dakota	**	42.6	113.3	70.1	1.9	38.1	104.9	64.2	**	35.1	102.5	61.2	1.8	34.0	99.0	59.5	–15.1



## Pregnancy Rates — Continued

Tennessee	9.3	69.4	170.2	110.9	8.5	66.6	167.8	107.5	9.0	66.0	170.5	107.3	7.7	64.1	167.1	104.5	-5.8
Texas	7.7	77.4	189.0	122.3	7.7	77.2	185.4	120.8	7.6	78.0	180.9	119.0	7.3	76.6	176.7	116.3	-4.8
Utah	3.0	37.2	110.8	65.6	2.4	36.6	104.4	62.9	2.2	35.0	96.5	59.1	2.2	34.3	92.7	58.1	-11.5
Vermont	3.4	45.5	132.1	81.0	3.0	44.0	124.9	76.2	3.2	41.2	118.8	71.6	3.4	36.7	109.3	64.7	-20.1
Virginia	7.2	58.0	141.3	93.2	7.1	56.4	135.9	89.6	6.7	56.0	136.8	89.2	6.2	54.4	127.8	84.2	-9.6
Washington	5.0	64.1	155.8	100.4	5.3	62.2	153.2	98.2	5.3	59.4	142.5	91.9	5.2	56.8	137.0	88.2	-12.1
West Virginia	3.8	45.9	125.2	78.0	4.9	46.5	121.3	76.7	3.5	45.8	115.2	73.5	3.7	43.7	117.4	73.3	-6.0
Wisconsin	4.5	41.6	118.1	71.7	4.7	39.7	109.3	67.2	4.1	37.4	101.4	62.4	4.1	36.2	95.5	59.2	-17.4
Wyoming	**	31.8	114.5	63.3	**	34.6	109.0	63.2	2.5	31.0	105.3	59.1	**	30.7	102.7	58.0	-8.4

\*Per 1000 females in age group (per 1000 females aged 13–14 years for the <15-year age group).

†Pregnancy rate could not be calculated for the following states because they did not provide abortion data by age for 1992–1995: Alaska, California, Delaware, Florida, Illinois, Iowa, New Hampshire, and Oklahoma.

§All percentage changes except for Arkansas were statistically significant at  $p < 0.05$ .

¶Pregnancy rate could not be calculated because the state did not provide abortion data for certain age groups.

\*\*Pregnancy rate was not calculated for groups with <20 pregnancies or <1000 adolescent females.

**TABLE 2. Pregnancy rates\* for adolescents aged 15–19 years, by race<sup>†</sup> and state<sup>§</sup> and percentage change in rate — United States, 1992–1995**

State	1992		1993		1994		1995		% Change in rate from 1992 to 1995	
	White	Black	White	Black	White	Black	White	Black	White	Black
Alabama	86.5	158.8	84.9	156.9	85.6	161.0	84.9	146.8	–1.8	–7.6
Arizona	120.6	177.6	116.8	168.2	116.3	152.5	109.0	113.4	–9.6	–36.2
Arkansas	90.5	168.2	88.5	158.4	91.5	168.3	88.3	158.6	–2.4	–5.7
Colorado	¶	¶	¶	¶	¶	¶	¶	¶	—	—
Georgia	93.9	192.1	92.1	182.4	88.9	174.4	90.2	165.6	–3.9	–13.8
Hawaii	76.3	**	75.2	**	73.6	**	51.7	80.0	–32.2	—
Idaho	70.0	**	66.6	**	60.7	**	63.3	**	–9.7	—
Indiana	74.2	184.8	72.4	178.1	74.1	169.6	74.1	158.4	–0.2	–14.3
Kansas	91.7	249.9	92.0	232.6	88.5	210.7	85.9	210.7	–6.3	–15.7
Kentucky	89.1	176.8	87.4	171.3	86.4	171.8	82.2	156.4	–7.7	–11.5
Louisiana	77.0	157.7 <sup>††</sup>	73.7	157.4 <sup>††</sup>	73.7	152.0 <sup>††</sup>	71.6	136.1 <sup>††</sup>	–6.9	–13.7 <sup>††</sup>
Maine	64.8	**	62.6	**	59.1	**	57.6	**	–11.1	—
Maryland	60.2	161.7	58.7	153.4	58.2	146.6	58.1	132.3	–3.4	–18.2
Minnesota	55.8	257.2	52.9	227.5	51.3	213.9	47.1	215.1	–15.6	–16.4
Mississippi	84.8	159.4	77.7	157.2	73.2	146.7	72.7	137.7	–14.3	–13.6
Missouri	71.9	219.4	69.0	197.3	69.6	183.1	66.4	161.0	–7.6	–26.6
Montana	72.9	**	70.4	**	66.5	**	65.5	**	–10.3	—
Nevada	120.2	201.9	115.3	180.4	114.4	163.0	117.7	141.5	–2.0	–29.9
New Jersey	48.6	211.9	48.4	211.0	46.1	200.3	46.4	177.5	–4.5	–16.2
New Mexico	120.6	118.9	116.4	126.7	109.5	103.8	106.8	99.6	–11.4	–16.2
New York	91.2	207.4	89.6	211.9	88.9	203.9	85.4	186.0	–6.3	–10.3
North Carolina	98.2	183.2	95.2	177.9	95.2	172.1	92.5	157.8	–5.8	–13.9
North Dakota	56.4	**	55.3	**	50.7	**	49.6	**	–12.1	—
Ohio	¶	¶	¶	¶	70.9	185.4	69.2	173.4	—	—
Oregon	93.6	214.3	92.4	218.2	90.5	206.4	90.5	184.7	–3.4	–13.8
Pennsylvania	63.1	249.4	61.6	246.6	56.8	224.9	53.7	208.1	–15.0	–16.6
Rhode Island	92.0	249.8	95.7	240.4	90.6	225.0	83.5	197.2	–9.2	–21.1
South Carolina	80.9	141.1	78.9	130.7	78.2	131.6	78.6	123.3	–2.8	–12.6
South Dakota	54.8	**	51.2	**	50.3	**	48.7	**	–11.1	—
Tennessee	91.3	191.6	88.1	186.0	88.5	181.8	87.3	170.5	–4.3	–11.0
Texas	115.8	175.5	115.7	166.0	115.0	157.0	114.3	142.2	–1.3	–19.0

Utah	64.0	**	61.5	**	57.7	**	56.6	**	-11.5	—
Vermont	80.6	**	75.9	**	71.6	**	65.4	**	-19.0	—
Virginia	74.2	164.4	72.2	153.3	72.9	148.4	68.5	139.0	-7.7	-15.5
Washington	¶	¶	¶	¶	¶	¶	¶	¶	—	—
West Virginia	76.2	137.4	75.0	135.1	71.5	138.8	71.1	137.6	-6.7	0.2
Wisconsin	53.4	267.6	51.2	239.3	48.2	212.3	46.5	194.9	-13.1	-27.2

\* Per 1000 adolescent females aged 15–19 years in each racial group. Rates were not calculated for some states according to the following hierarchy: 1) abortion data by age and race were not reported by state; 2) <20 pregnancies or <1000 adolescent females were in the group; and 3) for >15% of the abortion data, age or race of the woman was unknown.

† Pregnancy rate for adolescents of races other than white or black are not presented because the composition of this category varied widely by state and because abortion information was not available on the race breakdown of “others” for each state.

§ Pregnancy rate could not be calculated for the following states because they did not provide abortion data by age and race for 1992–1995: Alaska, California, Connecticut, Delaware, District of Columbia, Florida, Illinois, Iowa, Massachusetts, Michigan, Nebraska, New Hampshire, Oklahoma, and Wyoming.

¶ Pregnancy rate was not calculated because race information was missing for >15% of females who had had an abortion.

\*\* Pregnancy rate was not calculated for groups with <20 pregnancies or <1000 adolescent females.

†† Rate and percentage change is for all races other than white.

*Pregnancy Rates — Continued*

different groups of adolescents, and youth development approaches that seek to strengthen self-esteem and planning for the future (10).

In 1995, CDC funded 13 Community Coalition Partnership Programs for the Prevention of Teen Pregnancy to demonstrate how communities can mobilize resources in support of community-wide, sustainable efforts to prevent initial and repeat adolescent pregnancies. Rigorous evaluation of adolescent pregnancy prevention measures is an essential component of these community demonstration programs. The identification of effective strategies will assist state and local agencies in implementing successful approaches to continuing the downward trend in adolescent pregnancy.

*References*

1. Spitz AM, Velebil P, Koonin LM, et al. Pregnancy, abortion, and birth rates among US adolescents—1980, 1985, and 1990. *JAMA* 1996;275:989–94.
2. CDC. State-specific pregnancy and birth rates among teenagers—United States 1991–1992. *MMWR* 1995;44:677–84.
3. Ventura SJ, Curtin SC, Mathews TJ. Teenage births in the United States: national and state trends, 1990–1996. Hyattsville, Maryland: US Department of Health and Human Services, CDC, National Center for Health Statistics, 1998.
4. Koonin LM, Smith JC, Ramick M. Abortion surveillance—United States, 1992. *MMWR* 1996;45 (no. SS-3).
5. Koonin LM, Smith JC, Ramick M, Strauss LT. Abortion surveillance—United States, 1995. *MMWR* 1998;47 (in press).
6. Deardorff KE, Montgomery P, Hollmann FW. U.S. population estimates, by age, sex, race, and Hispanic origin: 1990 to 1995. Washington, DC: US Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1996 (file no. RESDO795,PPL-41).
7. Kochanek KD. Induced terminations of pregnancy: reporting state, 1988. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, CDC, National Center for Health Statistics, 1988 (Monthly vital statistics report; vol 39).
8. Kaufmann RB, Spitz AM, Strauss LT, et al. The decline in United States teen pregnancy rates, 1990–1995. *Pediatrics* (in press).
9. Piccinino LJ, Mosher WD. Trends in contraceptive use in the United States: 1982–1995. *Fam Plann Perspect* 1998;30:4–10,46.
10. Kirby D. No easy answers: research findings on programs to reduce teen pregnancy. Washington, DC: The National Campaign to Prevent Teen Pregnancy, 1997.

### **Progress Toward Poliomyelitis Eradication — Europe and Central Asian Republics, 1997–May 1998**

In 1988, the World Health Assembly resolved to eradicate poliomyelitis globally by 2000 (1). In 1995, the World Health Organization (WHO) European Region (EUR), comprising 51 member states (including Israel and the Central Asian Republics), accelerated efforts toward polio eradication. Improvements in status have been reported previously (2–4). This report summarizes progress toward polio eradication during 1997–1998\*, demonstrating that polio incidence has decreased to seven cases in 1997 and two cases in 1998, and surveillance has improved substantially.

**Supplemental vaccination activities.** Since 1995, National Immunization Days (NIDs)<sup>†</sup> were conducted in 18 contiguous countries of the WHO Eastern Mediterranean (eight countries: Afghanistan, Iran, Iraq, Jordan, Lebanon, Pakistan, Palestine,

\*The report contains data reported to EUR through May 30, 1998. Surveillance data for 1997 have been updated (2).

*Poliomyelitis — Continued*

and Syria) and European regions (10 countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkey, Turkmenistan, and Uzbekistan) as part of Operation MECACAR (Eastern Mediterranean, Caucasus, and Central Asian Republics). Reported coverage levels were >95% in 1997 with two doses of oral poliovirus vaccine (OPV), similar to levels achieved during previous years (2). Beginning in the autumn of 1997 with "mopping-up" vaccination,<sup>§</sup> coordinated activities in countries of the two regions continued as "Operation MECACAR Plus"; NIDs were conducted in April and May 1998, but final results are not available. Additional coordinated NIDs and "mopping-up" vaccination will continue through 2000 in selected countries, depending on the quality and results of local acute flaccid paralysis (AFP) surveillance.

**Surveillance.** AFP surveillance and virologic testing of stool specimens from AFP cases is a key strategy recommended by WHO for polio eradication. By 1998, a total of 17 countries where polio is endemic or was recently endemic have established AFP surveillance; in addition, 18 countries where polio is not endemic also report AFP surveillance data (Table 1). From January 1997 through May 1998, three countries (Albania, Belarus, and Kyrgyzstan) consistently achieved the minimum AFP reporting rate indicative of a sensitive surveillance system (at least one nonpolio AFP case per 100,000 children aged <15 years annually); reported rates for the Russian Federation in 1997 and 1998 and for Ukraine in 1997 are difficult to interpret because of the inclusion of cases of isolated facial paralysis. In addition, 13 other countries are close to achieving or have provisionally achieved the minimum reporting rate in 1998. The overall rate of collection of two adequate stool samples<sup>¶</sup> from persons with reported AFP cases increased to approximately 70% in 1997 and in 1998 (Table 1). During 1997–1998, few countries consistently achieved the WHO-recommended target of two adequate stool specimens collected from at least 80% of AFP cases. Beginning in 1998, a total of 29 of 35 countries are reporting case-based AFP surveillance data weekly to the WHO regional office. Completeness of reports received for weekly reporting is 83%; for the six countries still reporting aggregate counts of AFP cases monthly, completeness is 69%.

**EUR laboratory network.** The EUR polio laboratory network consists of 35 laboratories: 30 national laboratories, two subregional reference laboratories, and five regional reference laboratories (two of which are national laboratories) (5). WHO accreditation of national laboratories based on six objective criteria (5) is being implemented; 20 laboratories have received full accreditation. Four laboratories received provisional accreditation pending further experience or improvements in specific areas. Based on the status of accreditation, of the 1596 AFP cases reported in 1997, a total of 448 (28%) stool specimens were processed for virus isolation in fully accredited laboratories.

<sup>†</sup>Mass campaigns over a short period (days to weeks) in which two doses of OPV are administered to all children in the target age group, regardless of previous vaccination history, with an interval of 4–6 weeks between doses.

<sup>§</sup>Focal mass campaign in high-risk areas over a short period (days to weeks) in which two doses of OPV are administered during house-to-house visits to all children in the target age group, regardless of previous vaccination history, with an interval of 4–6 weeks between doses.

<sup>¶</sup>Two stool specimens collected at an interval of at least 24 hours within 14 days of onset of paralysis. WHO recommends that ≥80% of patients with AFP have two adequate specimens collected (4).

*Poliomyelitis — Continued***TABLE 1. Number of reported cases of nonpolio acute flaccid paralysis (AFP), nonpolio AFP rate\*, and percentage of persons with reported AFP with two stool specimens, by year and country — European Region (EUR), World Health Organization, 1997 and 1998†**

Country	1997			1998		
	No. nonpolio AFP cases	Nonpolio AFP rate	% of persons with AFP with two stool specimens§	No. nonpolio AFP cases	Nonpolio AFP rate	% of persons with AFP with two stool specimens§
Albania	12	1.11	83%	3	1.11	33%
Armenia	15	1.45	93%	4	0.91	75%
Azerbaijan	13	1.08	77%	1	0.24	100%
Belarus	34	1.53	100%	20	2.13	40%
Bosnia and Herzegovina	1	0.20	100%	1	1.16	100%
Bulgaria	9	0.61	100%	9	1.28	38%
Croatia	3	0.32	67%	0	0	
Czech Republic	9	0.49	78%	10	1.28	50%
Estonia	3	1.03	33%	1	0.82	0
Georgia	7	0.55	86%	4	0.77	75%
Greece¶	—	—	—	0	0	
Hungary**	—	—	—	5	0.65	20%
Israel	17	1.02	18%	6	0.85	17%
Italy	55	0.65	36%	30	0.83	33%
Kazakhstan	35	0.69	60%	10	0.61	80%
Kyrgyzstan	24	1.39	63%	8	1.42	88%
Latvia	0	0	0	0	0	
Malta††	3	3.61	0	1	2.85	100%
Netherlands	10	0.35	0	5	0.50	0
Poland	49	0.59	55%	11	0.31	36%
Portugal	0	0	0	0	0	
Republic of Moldova	8	0.68	88%	9	1.82	56%
Romania	39	0.89	100%	31	1.67	81%
Russian Federation	889	4.07	71%	223	4.08	92%
Slovak Republic	3	0.25	100%	2	0.40	0
Slovenia	0	0		0	0	
Spain§§	5	0.46	100%	23	0.83	52%
Switzerland	15	1.18	7%	1	0.19	0
Tajikistan	6	0.25	71%	2	0.20	100%
Former Yugoslav Republic of Macedonia	4	0.67	75%	1	0.39	100%
Turkey	135	0.62	65%	98	1.07	50%
Turkmenistan	9	0.56	56%	5	0.74	80%
Ukraine	149	1.76	79%	23	0.64	87%
Uzbekistan	14	0.15	86%	22	0.58	91%
Federal Republic of Yugoslavia	14	0.62	64%	17	1.95	65%
<b>Total</b>	<b>1589</b>	<b>1.12</b>	<b>69%</b>	<b>586</b>	<b>1.83</b>	<b>70%</b>

\*Per 100,000 children aged &lt;15 years. The rate for 1998 is annualized.

†Data reported to EUR through May 30, 1998.

§Two stool specimens collected at an interval of at least 24 hours within 14 days of onset of paralysis and adequately shipped to the laboratory.

¶AFP surveillance began in early 1998.

\*\*AFP surveillance began in January 1998.

††AFP surveillance began in July 1997.

§§AFP surveillance began in autumn 1997.

*Poliomyelitis — Continued*

**Incidence of polio.** From 1991 through 1996, the number of confirmed polio cases\*\* reported annually in EUR ranged from 177 to 297; in 1997, only seven cases from two countries (Tajikistan and Turkey) were reported. Wild poliovirus type 1 was isolated in six cases in one southeastern province of Turkey during July–December 1997 (3). To date, Turkey has reported two cases of polio from an adjoining province; one case had onset of paralysis in January and the other in April 1998. All recent isolates of wild poliovirus type 1 in Turkey are related to a single Middle East genotype. Because of inadequate stool specimen collection from some AFP cases in which there was residual paralysis, death, or loss to follow-up, 19 polio-compatible cases were reported in 1997 from seven countries.

**Certification process.** The European Regional Commission for the Certification of Poliomyelitis Eradication has begun reviewing comprehensive documentation on the vaccination and surveillance activities of EUR countries. All member countries have been asked to form national certification committees to objectively review country vaccination, laboratory, and epidemiologic surveillance data and submit relevant documentation to the regional commission. Documentation from the countries of Europe in which there has been an absence of reported cases for >8 years will be sought in 1998, followed by review for the other countries through 2000.

*Reported by: Communicable Diseases and Immunization Unit, World Health Organization Regional Office for Europe, Copenhagen, Denmark; Expanded Program on Immunization, Global Program for Vaccines and Immunization, World Health Organization, Geneva, Switzerland. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.*

**Editorial Note:** Polio transmission has been interrupted in most EUR countries where polio was previously endemic; this status is attributed to improvements in routine vaccination coverage and the successful implementation of NIDs through Operation MECACAR. In addition, surveillance activities in most EUR countries have improved. The quality of surveillance and laboratory performance in many areas of the region needs further improvement, particularly in all areas where polio was recently endemic, to ensure that indigenous transmission has been interrupted and that any transmission secondary to imported poliovirus is promptly detected.

WHO staff and consultants are assessing AFP surveillance systems and laboratory performance in 15 countries to determine how further improvements can be made; this is in anticipation of needing to provide definitive AFP and virologic surveillance data supporting the certification process. The incidence of facial paralysis has been unexpectedly high in some countries, possibly attributed to a high incidence of borreliosis. Reporting of facial paralysis has obscured the sensitivity of some surveillance systems monitoring paralytic illnesses more consistent with clinical polio. With the collection of information about individual AFP cases, future monitoring of AFP surveillance will provide more homogeneous data across EUR.

Southeastern areas of Turkey adjacent to Syria, Iran, and Iraq remain at high risk for wild poliovirus transmission; wild polioviruses have been isolated from AFP cases throughout 1997 in Iran and Iraq (4). Most areas of Tajikistan, Turkmenistan, and

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\*\*A confirmed case of polio is defined under the virologic scheme of classification as AFP with laboratory-confirmed wild poliovirus infection; in countries where virologic surveillance is inadequate, clinical cases have either residual paralysis at 60 days, death, or no follow-up investigation at 60 days. Most countries in EUR use the virologic scheme of classification of AFP cases, for which some AFP cases with residual paralysis at 60 days, death, or no follow-up investigation may be considered as polio-compatible cases.

*Poliomyelitis — Continued*

Uzbekistan remain at risk for polio because of confirmed ongoing poliovirus transmission in Afghanistan (4). Importation of wild poliovirus or continuing low-level indigenous transmission may not be detected because of weak surveillance and/or laboratory deficiencies. Interregional and intercountry efforts are ongoing to coordinate surveillance and supplementary vaccination activities in these key high-risk border areas. Supplemental vaccination activities will continue to be organized through 2000 under Operation MECACAR Plus to interrupt any remaining chains of poliovirus transmission. Mopping-up campaigns will be conducted in October and November 1998 in the high-risk areas that border countries of the Eastern Mediterranean Region where polio is endemic or was recently endemic.

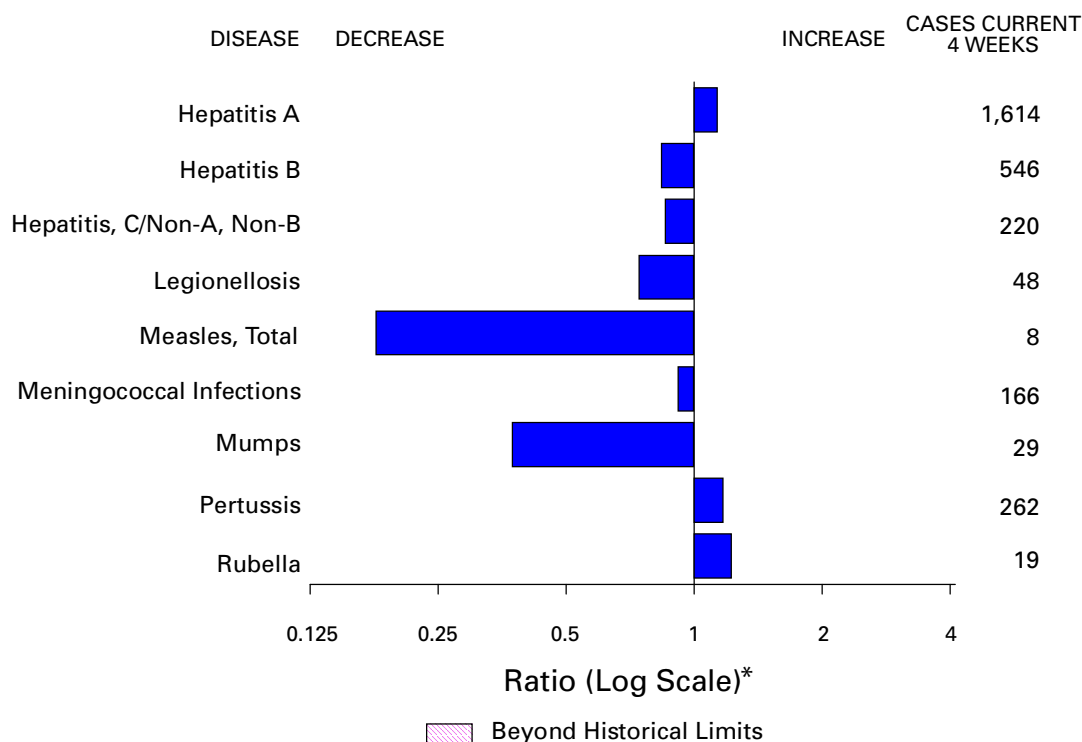
EUR priorities toward polio eradication by 2000 include 1) strengthening AFP surveillance systems throughout the region (including accreditation of all laboratories), particularly in the Caucasus, Turkey, and the Central Asian Republics; 2) ensuring that high-quality NIDs or sub-NIDs are conducted through Operation MECACAR Plus in selected countries with persistent high risk for wild poliovirus circulation caused by low vaccination coverage, weak surveillance, and/or administrative problems; 3) implementing coordinated supplemental vaccination activities among key border area populations; 4) maintaining and strengthening the political commitment of governments for polio eradication and certification; 5) consolidating the support of donor governments and partner agencies to ensure sufficient financial and human resources; and 6) progressing in the formal process of certification.

Polio eradication efforts in EUR have been supported by the governments of countries where polio is endemic or was recently endemic, WHO, United Nations Children's Fund (UNICEF), Rotary International, U.S. Agency for International Development, CDC, and through contributions from Canada, Denmark, European Union, Finland, France, Germany, Greece, Hungary, Italy, Japan, Luxembourg, Monaco, Netherlands, Norway, Switzerland, and the United Kingdom.

*References*

1. World Health Assembly. Global eradication of poliomyelitis by the year 2000. Geneva, Switzerland: World Health Organization, 1988; resolution no. 41.28.
2. CDC. Progress toward poliomyelitis eradication—Europe and Central Asian Republics, 1991–September 1997. *MMWR* 1997;46:994–1000.
3. CDC. Progress toward poliomyelitis eradication—Turkey, 1994–1997. *MMWR* 1998;47:116–20.
4. CDC. Progress toward global eradication of poliomyelitis, 1997. *MMWR* 1998;47:414–9.
5. CDC. Status of the global laboratory network for poliomyelitis eradication, 1994–1996. *MMWR* 1997;46:692–4.



**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending June 20, 1998, with historical data — United States**

\*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending June 20, 1998 (24th Week)**

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	2
Brucellosis	31	Poliomyelitis, paralytic <sup>¶</sup>	-
Cholera	3	Psittacosis	20
Congenital rubella syndrome	2	Rabies, human	-
Cryptosporidiosis*	814	Rocky Mountain spotted fever (RMSF)	68
Diphtheria	1	Streptococcal disease, invasive Group A	1,066
Encephalitis: California*	2	Streptococcal toxic-shock syndrome*	33
eastern equine*	-	Syphilis, congenital**	128
St. Louis*	-	Tetanus	11
western equine*	-	Toxic-shock syndrome	63
Hansen Disease	54	Trichinosis	6
Hantavirus pulmonary syndrome* <sup>†</sup>	4	Typhoid fever	130
Hemolytic uremic syndrome, post-diarrheal*	14	Yellow fever	-
HIV infection, pediatric* <sup>§</sup>	106		

-:no reported cases

\*Not notifiable in all states.

<sup>†</sup> Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

<sup>§</sup> Updated monthly to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update May 24, 1998.

<sup>¶</sup> One suspected case of polio with onset in 1998 has been reported to date.

\*\*Updated from reports to the Division of STD Prevention, NCHSTP.

**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending June 20, 1998, and June 14, 1997 (24th Week)**

Reporting Area	AIDS		Chlamydia		<i>Escherichia coli</i> O157:H7		Gonorrhea		Hepatitis C/NA,NB	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	NETSS†	PHLIS‡	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
UNITED STATES	20,034	25,974	236,084	225,050	606	305	138,335	128,357	1,827	1,589
NEW ENGLAND	640	897	8,701	7,943	84	60	2,297	2,678	19	30
Maine	13	25	419	427	5	-	25	25	-	-
N.H.	21	14	424	355	12	16	42	56	-	-
Vt.	10	18	179	186	1	3	13	24	-	1
Mass.	275	416	3,874	3,279	47	30	920	1,012	18	26
R.I.	58	70	1,153	948	3	1	172	216	1	3
Conn.	263	354	2,652	2,748	16	10	1,125	1,345	-	-
MID. ATLANTIC	5,695	8,265	28,966	26,631	61	10	16,020	16,156	186	158
Upstate N.Y.	710	1,336	N	N	39	-	2,781	2,797	140	123
N.Y. City	3,153	4,136	15,749	13,890	3	5	6,757	6,149	-	-
N.J.	993	1,783	4,626	4,706	19	4	2,631	3,336	-	-
Pa.	839	1,010	8,591	8,035	N	1	3,851	3,874	46	35
E.N. CENTRAL	1,518	1,809	40,052	33,354	106	60	26,758	19,779	239	305
Ohio	281	394	11,395	10,171	26	11	6,752	6,255	6	7
Ind.	293	328	3,288	3,991	25	20	2,083	2,717	3	9
Ill.	610	602	11,444	6,018	29	-	8,995	2,940	11	50
Mich.	252	394	9,898	8,235	26	13	7,324	5,816	219	221
Wis.	82	91	4,027	4,939	N	16	1,604	2,051	-	18
W.N. CENTRAL	351	520	13,981	14,494	75	36	6,805	6,372	108	32
Minn.	56	83	2,016	3,019	30	20	708	1,050	5	2
Iowa	20	66	2,010	2,149	17	-	638	580	11	15
Mo.	176	254	5,375	5,353	10	12	3,928	3,418	88	4
N. Dak.	4	4	290	392	1	1	29	24	-	2
S. Dak.	9	2	765	563	1	1	125	57	-	-
Nebr.	36	48	1,020	902	7	-	346	324	2	2
Kans.	50	63	2,505	2,116	9	2	1,031	919	2	7
S. ATLANTIC	5,037	6,477	49,873	40,021	41	16	39,972	38,291	94	104
Del.	57	111	1,172	612	-	1	637	524	-	-
Md.	571	742	3,794	3,366	11	4	4,194	5,397	5	3
D.C.	413	469	N	N	1	-	1,629	1,886	-	-
Va.	368	552	4,623	5,205	N	7	2,759	3,607	5	10
W. Va.	47	38	1,298	1,400	N	1	370	440	4	8
N.C.	335	363	10,324	7,722	11	3	8,622	7,512	12	28
S.C.	318	295	8,650	5,657	1	-	5,586	5,115	1	24
Ga.	608	856	11,394	4,426	4	-	9,341	5,728	9	-
Fla.	2,320	3,051	8,618	11,633	12	-	6,834	8,082	58	31
E.S. CENTRAL	788	807	16,992	15,572	39	11	16,040	15,348	70	172
Ky.	101	112	2,834	3,016	10	-	1,610	1,912	11	7
Tenn.	272	354	5,934	5,823	20	10	5,024	4,792	56	105
Ala.	233	196	4,564	3,716	9	-	5,718	5,210	3	6
Miss.	182	145	3,660	3,017	U	1	3,688	3,434	U	54
W.S. CENTRAL	2,473	2,590	35,058	22,058	42	5	19,926	15,094	507	186
Ark.	81	96	1,442	1,297	1	1	1,128	2,113	3	5
La.	415	493	5,872	3,671	-	1	4,800	3,444	9	96
Okla.	134	138	4,646	3,349	6	3	2,530	2,115	2	4
Tex.	1,843	1,863	23,098	13,741	35	-	11,468	7,422	493	81
MOUNTAIN	725	751	8,007	13,358	59	41	2,953	3,500	226	145
Mont.	13	18	556	470	4	-	23	20	4	10
Idaho	14	22	874	658	6	1	78	47	86	23
Wyo.	2	13	301	255	1	-	15	25	37	36
Colo.	127	194	-	2,770	19	11	1,054	823	13	19
N. Mex.	111	66	1,772	1,865	9	6	329	418	51	30
Ariz.	286	188	3,534	5,180	N	9	1,296	1,654	3	17
Utah	57	60	717	785	13	8	66	110	19	3
Nev.	115	190	253	1,375	7	6	92	403	13	7
PACIFIC	2,807	3,858	34,454	51,619	99	66	7,564	11,139	378	457
Wash.	203	287	4,967	4,197	23	22	858	896	10	14
Oreg.	88	144	2,584	2,154	27	23	349	320	2	2
Calif.	2,463	3,377	25,060	43,858	47	18	6,010	9,510	311	359
Alaska	12	22	875	635	2	-	152	185	1	-
Hawaii	41	28	968	775	N	3	195	228	54	82
Guam	-	2	8	193	N	-	2	27	-	-
P.R.	834	760	U	U	-	U	187	298	-	61
V.I.	17	35	N	N	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	1	N	N	N	U	7	16	-	2

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

\*Updated monthly to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update May 24, 1998.

†National Electronic Telecommunications System for Surveillance.

‡Public Health Laboratory Information System.

**TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending June 20, 1998, and June 14, 1997 (24th Week)**

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998*	Cum. 1997	Cum. 1998
UNITED STATES	466	382	2,204	1,655	494	641	3,035	3,961	3,438	9,058	3,179
NEW ENGLAND	23	27	643	402	19	31	36	77	146	197	620
Maine	1	1	1	3	3	1	1	-	U	15	101
N.H.	2	4	13	7	3	2	1	-	2	6	33
Vt.	1	4	3	3	-	2	3	-	1	3	30
Mass.	9	8	125	55	11	16	22	39	119	109	200
R.I.	4	5	31	43	2	2	-	1	24	13	35
Conn.	6	5	470	291	-	8	9	37	U	51	221
MID. ATLANTIC	100	66	1,221	947	126	184	99	197	244	1,375	686
Upstate N.Y.	28	15	664	122	33	27	16	20	U	191	486
N.Y. City	19	3	3	76	60	110	22	36	U	714	U
N.J.	4	11	193	288	19	35	18	86	244	283	86
Pa.	49	37	361	461	14	12	43	55	U	187	114
E.N. CENTRAL	143	141	34	30	46	69	409	349	230	809	42
Ohio	63	62	32	12	3	6	74	109	5	146	33
Ind.	19	24	2	9	3	7	66	75	U	70	-
Ill.	14	5	-	2	15	30	157	36	225	423	2
Mich.	29	31	-	7	24	17	89	59	U	122	6
Wis.	18	19	U	U	1	9	23	70	U	48	1
W.N. CENTRAL	34	26	21	20	30	19	70	76	116	228	330
Minn.	3	1	9	11	13	5	3	13	U	64	63
Iowa	4	7	9	-	3	6	-	3	U	20	73
Mo.	12	2	-	7	10	5	54	39	80	91	17
N. Dak.	-	2	-	-	2	-	-	-	U	5	64
S. Dak.	-	1	-	-	-	-	1	-	13	4	54
Nebr.	12	10	1	1	-	1	4	1	5	6	2
Kans.	3	3	2	1	2	2	8	20	18	38	57
S. ATLANTIC	60	51	197	160	118	109	1,279	1,603	662	1,390	1,005
Del.	7	5	4	32	1	2	15	14	-	14	17
Md.	12	11	136	102	41	40	306	448	132	136	245
D.C.	4	3	4	6	7	7	36	61	53	46	-
Va.	5	10	14	2	19	26	84	130	118	140	317
W. Va.	N	N	4	-	-	-	2	3	24	24	41
N.C.	6	6	9	7	8	7	353	326	193	172	136
S.C.	5	2	1	1	4	7	148	197	142	113	72
Ga.	1	-	2	1	15	13	231	283	U	260	81
Fla.	19	14	23	9	23	7	104	141	U	485	96
E.S. CENTRAL	19	19	23	35	13	15	523	858	160	561	121
Ky.	11	6	6	5	1	4	58	72	U	80	19
Tenn.	5	6	8	12	8	4	265	355	U	208	70
Ala.	3	2	9	4	4	4	121	222	160	181	32
Miss.	U	5	U	14	U	3	79	209	U	92	U
W.S. CENTRAL	16	5	10	10	17	7	389	526	53	1,146	103
Ark.	-	-	5	3	1	1	52	87	53	98	21
La.	1	1	-	1	4	4	134	185	-	85	-
Okla.	6	1	-	2	2	2	24	56	U	87	82
Tex.	9	3	5	4	10	-	179	198	U	876	-
MOUNTAIN	29	25	3	5	24	35	87	84	194	245	74
Mont.	1	1	-	-	-	2	-	-	12	6	26
Idaho	-	2	1	-	3	-	-	-	4	5	-
Wyo.	1	1	-	1	-	2	1	-	2	2	39
Colo.	5	5	1	2	7	16	7	2	U	48	1
N. Mex.	2	1	-	-	9	5	12	4	27	17	-
Ariz.	4	7	-	1	4	4	62	69	92	111	7
Utah	15	5	-	-	1	2	3	3	28	10	1
Nev.	1	3	1	1	-	4	2	6	29	46	-
PACIFIC	42	22	52	46	101	172	143	191	1,633	3,107	198
Wash.	4	6	1	1	9	8	9	6	17	128	-
Oreg.	-	-	8	9	9	10	2	4	U	68	-
Calif.	37	15	43	36	82	148	132	179	1,520	2,778	181
Alaska	-	-	-	-	-	3	-	1	20	42	17
Hawaii	1	1	-	-	1	3	-	1	76	91	-
Guam	-	-	-	-	-	-	-	3	-	13	-
P.R.	-	-	-	-	-	3	109	101	46	88	27
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	-	1	7	8	-	-

N: Not notifiable    U: Unavailable    -: no reported cases

\*Additional information about areas displaying "U" for cumulative 1998 Tuberculosis cases can be found in Notice to Readers, *MMWR* Vol. 47, No. 2, p. 39.

**TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 20, 1998, and June 14, 1997 (24th Week)**

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998	Cum. 1998	Cum. 1997
UNITED STATES	526	562	10,113	12,822	3,538	4,250	-	23	1	13	36	72
NEW ENGLAND	30	32	128	300	50	78	-	-	-	1	1	10
Maine	2	3	13	41	-	5	-	-	-	-	-	-
N.H.	5	4	7	17	9	5	-	-	-	-	-	1
Vt.	2	2	10	7	1	3	-	-	-	-	-	-
Mass.	19	20	38	148	15	35	-	-	-	1	1	8
R.I.	2	2	9	26	25	8	-	-	-	-	-	-
Conn.	-	1	51	61	-	22	-	-	-	-	-	1
MID. ATLANTIC	74	69	636	1,123	511	645	-	9	-	2	11	16
Upstate N.Y.	29	6	152	137	143	116	-	2	-	-	2	4
N.Y. City	13	22	174	495	132	262	-	-	-	-	-	5
N.J.	28	25	140	166	90	125	-	7	-	1	8	2
Pa.	4	16	170	325	146	142	U	-	U	1	1	5
E.N. CENTRAL	82	85	1,249	1,382	351	722	-	9	1	3	12	7
Ohio	34	42	159	192	33	41	-	-	1	1	1	-
Ind.	24	8	73	141	26	52	U	2	U	1	3	-
Ill.	23	24	218	340	66	140	-	-	-	-	-	5
Mich.	-	11	713	606	210	225	-	7	-	1	8	2
Wis.	1	-	86	103	16	264	-	-	-	-	-	-
W.N. CENTRAL	39	27	828	926	155	249	-	-	-	-	-	11
Minn.	25	18	60	86	16	18	-	-	-	-	-	2
Iowa	1	3	365	133	26	19	-	-	-	-	-	-
Mo.	8	3	325	500	86	187	-	-	-	-	-	1
N. Dak.	-	-	3	9	4	1	-	-	-	-	-	-
S. Dak.	-	2	8	13	1	-	-	-	-	-	-	8
Nebr.	-	1	15	38	7	8	-	-	-	-	-	-
Kans.	5	-	52	147	15	16	-	-	-	-	-	-
S. ATLANTIC	111	97	886	656	505	498	-	2	-	5	7	3
Del.	-	-	2	13	-	3	-	-	-	1	1	-
Md.	34	40	162	110	79	75	-	-	-	1	1	1
D.C.	-	-	28	14	6	21	-	-	-	-	-	1
Va.	12	6	124	87	51	57	-	-	-	2	2	-
W. Va.	4	3	1	6	3	8	-	-	-	-	-	-
N.C.	13	16	48	103	82	108	-	-	-	-	-	1
S.C.	4	3	16	64	3	57	-	-	-	-	-	-
Ga.	23	20	236	120	82	47	-	-	-	1	1	-
Fla.	21	9	269	139	199	122	-	2	-	-	2	-
E.S. CENTRAL	31	36	171	320	187	315	-	-	-	-	-	1
Ky.	4	4	10	38	22	19	-	-	-	-	-	-
Tenn.	20	22	117	194	134	205	-	-	-	-	-	-
Ala.	7	8	44	49	31	32	-	-	-	-	-	1
Miss.	U	2	U	39	U	59	U	U	U	U	U	-
W.S. CENTRAL	29	26	1,986	2,554	598	496	-	-	-	-	-	4
Ark.	-	1	40	119	34	34	-	-	-	-	-	-
La.	13	6	40	106	45	57	-	-	-	-	-	-
Okla.	14	17	269	789	31	17	-	-	-	-	-	-
Tex.	2	2	1,637	1,540	488	388	-	-	-	-	-	4
MOUNTAIN	65	64	1,606	1,901	396	409	-	-	-	-	-	7
Mont.	-	-	51	49	3	5	-	-	-	-	-	-
Idaho	-	1	126	76	17	14	-	-	-	-	-	-
Wyo.	-	1	23	19	2	14	-	-	-	-	-	-
Colo.	14	9	123	219	46	80	-	-	-	-	-	-
N. Mex.	5	6	82	147	161	139	-	-	-	-	-	-
Ariz.	36	23	1,025	871	107	84	-	-	-	-	-	5
Utah	4	3	108	331	37	48	-	-	-	-	-	-
Nev.	6	21	68	189	23	25	U	-	U	-	-	2
PACIFIC	65	126	2,623	3,660	785	838	-	3	-	2	5	13
Wash.	3	2	556	251	61	34	-	-	-	1	1	-
Oreg.	29	22	194	189	53	55	-	-	-	-	-	-
Calif.	27	97	1,839	3,125	660	732	-	3	-	1	4	10
Alaska	1	1	11	22	6	11	-	-	-	-	-	-
Hawaii	5	4	23	73	5	6	-	-	-	-	-	3
Guam	-	-	-	-	-	3	U	-	U	-	-	-
P.R.	2	-	23	172	245	660	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	5	-	1	7	25	U	-	U	-	-	1

N: Not notifiable      U: Unavailable      -: no reported cases

\*Of 122 cases among children aged <5 years, serotype was reported for 66 and of those, 30 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

**TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 20, 1998, and June 14, 1997 (24th Week)**

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	1,404	1,896	3	224	323	52	1,940	2,445	2	242	58
NEW ENGLAND	67	115	-	-	7	4	322	524	-	32	-
Maine	4	11	-	-	-	-	5	6	-	-	-
N.H.	4	11	-	-	-	2	27	61	-	-	-
Vt.	1	2	-	-	-	1	31	164	-	-	-
Mass.	32	62	-	-	2	1	250	271	-	6	-
R.I.	3	8	-	-	4	-	3	12	-	-	-
Conn.	23	21	-	-	1	-	6	10	-	26	-
MID. ATLANTIC	139	194	-	15	34	3	249	186	1	111	13
Upstate N.Y.	36	46	-	3	5	3	120	63	1	104	2
N.Y. City	15	33	-	4	1	-	4	45	-	2	11
N.J.	37	37	-	1	6	-	5	11	-	4	-
Pa.	51	78	U	7	22	U	120	67	U	1	-
E.N. CENTRAL	202	281	-	39	36	6	182	231	-	-	3
Ohio	83	103	-	19	13	5	71	68	-	-	-
Ind.	25	33	U	3	4	U	48	27	U	-	-
Ill.	47	82	-	1	8	-	14	30	-	-	-
Mich.	26	38	-	16	10	1	32	31	-	-	-
Wis.	21	25	-	-	1	-	17	75	-	-	3
W.N. CENTRAL	116	137	-	20	8	9	153	139	-	13	-
Minn.	19	23	-	10	3	7	86	86	-	-	-
Iowa	16	27	-	6	4	2	38	8	-	-	-
Mo.	48	64	-	3	-	-	12	22	-	2	-
N. Dak.	-	1	-	1	-	-	-	2	-	-	-
S. Dak.	6	4	-	-	-	-	4	3	-	-	-
Nebr.	4	4	-	-	1	-	5	3	-	-	-
Kans.	23	14	-	-	-	-	8	15	-	11	-
S. ATLANTIC	248	315	1	32	36	4	121	195	1	6	17
Del.	1	4	-	-	-	-	1	-	-	-	-
Md.	22	31	-	-	1	-	25	74	-	-	-
D.C.	-	5	-	-	-	-	1	2	-	-	-
Va.	22	31	-	4	4	-	6	19	-	-	1
W. Va.	7	13	-	-	-	-	1	4	-	-	-
N.C.	34	55	-	7	7	-	42	46	-	3	10
S.C.	37	38	-	4	9	-	13	9	-	-	6
Ga.	55	60	-	1	5	1	4	6	-	-	-
Fla.	70	78	1	16	10	3	28	35	1	3	-
E.S. CENTRAL	103	134	1	1	19	-	48	44	-	-	1
Ky.	16	35	-	-	3	-	18	11	-	-	-
Tenn.	40	43	1	1	3	-	17	15	-	-	-
Ala.	47	39	-	-	6	-	13	12	-	-	1
Miss.	U	17	U	U	7	U	U	6	U	U	-
W.S. CENTRAL	155	187	-	31	40	1	124	70	-	62	3
Ark.	22	25	-	-	-	-	16	4	-	-	-
La.	35	33	-	2	11	-	1	11	-	-	-
Okla.	26	23	-	-	-	-	13	8	-	-	-
Tex.	72	106	-	29	29	1	94	47	-	62	3
MOUNTAIN	83	114	-	21	44	16	435	660	-	5	4
Mont.	2	7	-	-	-	-	1	7	-	-	-
Idaho	4	7	-	3	2	1	177	429	-	-	1
Wyo.	3	1	-	1	1	-	7	4	-	-	-
Colo.	19	31	-	4	3	5	85	159	-	-	-
N. Mex.	15	19	N	N	N	2	64	32	-	1	-
Ariz.	28	26	-	4	27	7	68	15	-	1	3
Utah	9	11	-	3	6	1	22	4	-	2	-
Nev.	3	12	U	6	5	U	11	10	U	1	-
PACIFIC	291	419	1	65	99	9	306	396	-	13	17
Wash.	38	51	-	5	12	5	136	177	-	9	3
Oreg.	55	85	N	N	N	-	17	23	-	-	-
Calif.	193	280	1	45	71	4	147	185	-	2	7
Alaska	1	1	-	2	5	-	2	2	-	-	-
Hawaii	4	2	-	13	11	-	4	9	-	2	7
Guam	-	1	U	-	1	U	-	-	U	-	-
P.R.	4	9	-	1	4	-	2	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	-	4	U	-	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE IV. Deaths in 122 U.S. cities,\* week ending  
June 20, 1998 (24th Week)**

Reporting Area	All Causes, By Age (Years)						P&I†	Total	Reporting Area	All Causes, By Age (Years)						P&I†	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	508	359	92	33	11	13	35		S. ATLANTIC	1,630	1,023	375	152	46	33	87	
Boston, Mass.	119	77	27	5	5	5	13		Atlanta, Ga.	560	340	134	64	13	9	15	
Bridgeport, Conn.	41	33	5	3	-	-	1		Baltimore, Md.	211	119	51	28	10	2	25	
Cambridge, Mass.	18	14	2	2	-	-	2		Charlotte, N.C.	93	66	18	5	1	3	13	
Fall River, Mass.	29	23	4	2	-	-	-		Jacksonville, Fla.	130	84	32	8	3	3	7	
Hartford, Conn.	41	26	8	5	1	1	-		Miami, Fla.	110	82	19	5	4	-	-	
Lowell, Mass.	27	16	7	4	-	-	1		Norfolk, Va.	52	33	8	5	3	3	3	
Lynn, Mass.	13	11	-	2	-	-	-		Richmond, Va.	56	36	16	2	-	2	1	
New Bedford, Mass.	16	12	3	1	-	-	2		Savannah, Ga.	48	29	13	3	2	1	-	
New Haven, Conn.	34	27	4	2	-	1	3		St. Petersburg, Fla.	53	42	6	4	1	-	7	
Providence, R.I.	49	39	6	-	2	2	2		Tampa, Fla.	172	110	43	11	3	5	14	
Somerville, Mass.	0	0	-	-	-	-	-		Washington, D.C.	135	80	27	17	6	5	2	
Springfield, Mass.	35	18	10	2	1	4	2		Wilmington, Del.	10	2	8	-	-	-	-	
Waterbury, Conn.	25	20	3	1	1	-	3										
Worcester, Mass.	60	42	13	4	1	-	6		E.S. CENTRAL	795	540	162	55	15	22	48	
MID. ATLANTIC	2,043	1,428	396	155	32	31	82		Birmingham, Ala.	174	115	35	14	4	5	15	
Albany, N.Y.	53	38	10	1	1	3	2		Chattanooga, Tenn.	66	48	13	1	3	1	5	
Allentown, Pa.	18	15	2	1	-	-	-		Knoxville, Tenn.	64	50	11	3	-	-	7	
Buffalo, N.Y.	88	69	13	1	5	-	2		Lexington, Ky.	64	46	13	2	-	3	4	
Camden, N.J.	28	16	7	5	-	-	3		Memphis, Tenn.	178	115	32	16	7	8	11	
Elizabeth, N.J.	19	10	5	4	-	-	-		Mobile, Ala.	87	60	22	3	-	2	-	
Erie, Pa.	35	30	5	-	-	-	-		Montgomery, Ala.	39	22	9	8	-	-	2	
Jersey City, N.J.	34	19	7	7	1	-	-		Nashville, Tenn.	123	84	27	8	1	3	4	
New York City, N.Y.	1,064	741	209	78	15	21	39		W.S. CENTRAL	1,309	842	262	128	43	34	69	
Newark, N.J.	60	27	17	11	4	-	1		Austin, Tex.	75	52	15	6	1	1	6	
Paterson, N.J.	21	13	5	2	1	-	-		Baton Rouge, La.	36	10	14	7	3	2	-	
Philadelphia, Pa.	200	129	42	22	4	3	11		Corpus Christi, Tex.	46	36	5	1	1	3	6	
Pittsburgh, Pa.‡	92	64	19	6	1	2	3		Dallas, Tex.	174	114	26	18	10	6	7	
Reading, Pa.	23	19	4	-	-	-	1		El Paso, Tex.	63	42	13	5	1	2	4	
Rochester, N.Y.	113	86	17	8	-	2	4		Ft. Worth, Tex.	95	68	14	10	2	1	2	
Schenectady, N.Y.	33	26	5	2	-	-	2		Houston, Tex.	361	214	83	48	10	6	23	
Scranton, Pa.	31	26	5	-	-	-	-		Little Rock, Ark.	60	33	15	7	2	3	-	
Syracuse, N.Y.	92	70	17	5	-	-	14		New Orleans, La.	107	57	25	15	4	6	-	
Trenton, N.J.	19	14	4	1	-	-	-		San Antonio, Tex.	186	140	31	7	6	2	16	
Utica, N.Y.	20	16	3	1	-	-	-		Shreveport, La.	U	U	U	U	U	U	U	
Yonkers, N.Y.	U	U	U	U	U	U	U		Tulsa, Okla.	106	76	21	4	3	2	5	
E.N. CENTRAL	1,950	1,313	393	151	47	43	102		MOUNTAIN	1,038	688	188	101	30	30	60	
Akron, Ohio	38	26	12	-	-	-	-		Albuquerque, N.M.	113	72	24	14	1	2	4	
Canton, Ohio	34	31	2	-	1	-	2		Boise, Idaho	36	26	5	1	-	4	1	
Chicago, Ill.	393	234	91	43	12	11	28		Colo. Springs, Colo.	55	32	13	7	-	3	5	
Cincinnati, Ohio	89	65	15	6	1	2	7		Denver, Colo.	111	75	12	12	4	8	5	
Cleveland, Ohio	109	70	25	9	2	3	-		Las Vegas, Nev.	189	123	39	19	8	-	13	
Columbus, Ohio	192	121	48	14	7	2	16		Ogden, Utah	24	19	2	2	1	-	4	
Dayton, Ohio	120	83	23	11	2	1	5		Phoenix, Ariz.	225	136	46	26	8	8	12	
Detroit, Mich.	197	119	53	13	8	3	7		Pueblo, Colo.	30	23	5	2	-	-	2	
Evansville, Ind.	37	30	4	2	-	1	2		Salt Lake City, Utah	112	75	20	10	3	4	6	
Fort Wayne, Ind.	44	38	4	1	1	-	2		Tucson, Ariz.	143	107	22	8	5	1	8	
Gary, Ind.	12	8	4	-	-	-	1		PACIFIC	1,842	1,334	332	105	33	38	127	
Grand Rapids, Mich.	62	48	7	4	1	2	7		Berkeley, Calif.	16	12	4	-	-	-	-	
Indianapolis, Ind.	178	126	36	10	3	3	-		Fresno, Calif.	108	81	16	7	3	1	-	
Lansing, Mich.	47	36	8	2	1	-	5		Glendale, Calif.	40	34	6	-	-	-	3	
Milwaukee, Wis.	107	71	21	8	2	5	8		Honolulu, Hawaii	67	49	12	2	2	2	3	
Peoria, Ill.	41	30	5	4	-	2	2		Long Beach, Calif.	73	51	18	3	-	1	11	
Rockford, Ill.	48	28	13	6	-	1	4		Los Angeles, Calif.	503	368	86	30	9	10	24	
South Bend, Ind.	53	39	6	5	1	2	2		Pasadena, Calif.	23	16	5	1	-	1	1	
Toledo, Ohio	79	59	8	4	5	3	2		Portland, Oreg.	100	78	11	4	4	3	9	
Youngstown, Ohio	70	51	8	9	-	2	2		Sacramento, Calif.	162	119	34	8	1	-	19	
W.N. CENTRAL	753	536	107	49	23	28	46		San Diego, Calif.	145	98	31	11	2	3	13	
Des Moines, Iowa	U	U	U	U	U	U	U		San Francisco, Calif.	136	92	30	8	2	4	18	
Duluth, Minn.	32	24	7	-	1	-	2		San Jose, Calif.	158	119	25	6	4	4	9	
Kansas City, Kans.	28	21	3	2	1	1	-		Santa Cruz, Calif.	29	20	7	2	-	-	3	
Kansas City, Mo.	107	70	10	10	4	3	4		Seattle, Wash.	136	85	29	14	5	3	1	
Lincoln, Nebr.	43	35	6	1	1	-	3		Spokane, Wash.	59	48	5	4	-	2	7	
Minneapolis, Minn.	188	138	26	15	3	6	11		Tacoma, Wash.	87	64	13	5	1	4	6	
Omaha, Nebr.	95	71	12	4	2	6	6		TOTAL	11,868†	8,063	2,307	929	280	272	656	
St. Louis, Mo.	111	65	23	9	5	9	12										
St. Paul, Minn.	84	62	9	5	6	2	7										
Wichita, Kans.	65	50	11	3	-	1	1										

U: Unavailable - : no reported cases

\*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

‡Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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